

Convair-Liner

THIS IS
CONVAIR



649

CONSOLIDATED VULTEE
AIRCRAFT CORPORATION

GENERAL OFFICES
SAN DIEGO, CALIFORNIA

DIVISIONS AT SAN DIEGO AND POMONA, CALIFORNIA
FORT WORTH AND DAINGERFIELD, TEXAS

CONVAIR

Contents

Message from Chairman of the Board and President	2, 3
History of Convair	4, 9
Famous Convair "Firsts"	10, 11
San Diego Division	12, 13
Fort Worth Division	14, 15
Pomona Division	16, 17
Daingerfield Division	16, 17
Convair-Liner Operations Map	Centerfold "A"
The Business Side of Convair	Centerfold "B"
How Convair Builds Airpower:	
Research and Design	18, 19
Tooling and Fabrication	20, 21
Production, Assembly	22, 23
Planning for the Future:	
Guided Missiles, Electronics and Strategic Bombers	24, 25
Interceptors and Water-Based Aircraft	26, 27
Commercial and Military Convair-Liners	28, 29
The Convair Family	30-32



Security Regulations

All of Convair's Divisions are either wholly or partially engaged in the performance of defense contracts. Visitors to Convair's plants must, therefore, comply with Department of Defense security regulations. Clearance must be obtained in order to visit any of Convair's plants. If the visit does *not* require access to classified security information or classified areas the clearance may be applied for at the reception desk of the plant visited, at the time of the visit. If the visit *does* require access to classified security information, or if the visitor is an alien or foreign national, the request for clearance must be submitted in advance to the Department of Defense Agency having security cognizance of the particular plant to which clearance is desired. Cognizance is assigned as follows:

SAN DIEGO DIVISION

Plant 1—Bureau of Aeronautics Representative, U. S. Navy.
Plant 2—Air Force Plant Representative.

FORT WORTH DIVISION

Air Force Plant Representative.

POMONA DIVISION

Inspector of Naval Ordnance, U. S. Navy.

DAINGERFIELD DIVISION

Navy Contract Director, Ordnance Aerophysics Laboratory

Special procedures govern the clearance of customer or vendor personnel assigned to any of Convair's plants as representatives. Requests for clearance of representatives should be submitted to the Industrial Security Department of the plant to which the representative is to be assigned or, in the case of commercial airline customers, to the Contracts Department, Convair, San Diego 12, California.

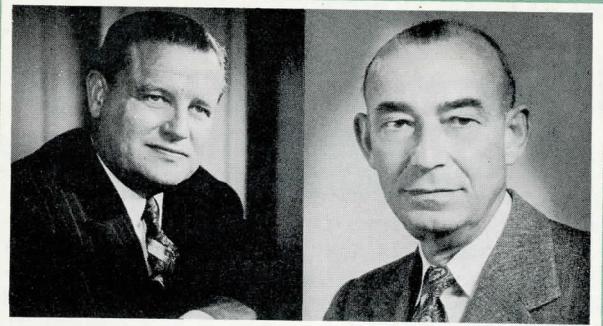
We know that you appreciate and understand the need for strict compliance with the security regulations which of necessity must be imposed. Your cooperation in their observance will be appreciated.

About Bigness... and the Big Job

CONSOLIDATED Vultee Aircraft Corporation (Convair) is a big company, one of the largest in the aircraft business. Our four divisions, located at San Diego and Pomona, California, and at Fort Worth and Daingerfield, Texas, together have nearly nine million square feet of floor space . . . more area than forty city blocks. Our combined working force totals 50,000 men and women; only 200 cities in the United States have greater populations. Last year our net sales exceeded \$390,000,000 . . . the equivalent of \$2.50 for every adult and child in the country.

Such statistics are impressive, yet they tell little more about our company than a list of bare dimensions would relate about the mission, or performance capabilities, of one of the airplanes we build. But there is a reason why Convair's size is important: It affords the military services a production potential unsurpassed by any other aircraft company. The value of the potential cannot be over-estimated because, as you read these words, the Soviet Union is out-producing America in military aircraft—and already holds a wide margin in combat-ready planes. Convair's productive capacity is meaningful, too, in maintaining national leadership in the commercial air transport field. More Convair-Liners have been sold to more airlines than any other postwar twin-engine transport plane.

But the ability to build aircraft in quantity is only half the story; *quality* is equally important. In war and in peace, Convair has fully demonstrated its



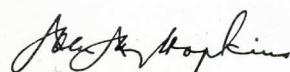
John Jay Hopkins

Joseph T. McNarney

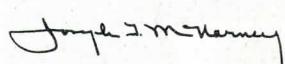
ability to build better airplanes, at a faster rate, and for less cost. That is why Convair outproduced the world in airframes during World War II. It is also why the commercial Convair-Liner is the standard medium-range transport plane of the postwar world. And it is why Convair today is entrusted with design, development and production projects which are vital to the air arms of our military services.

Militarily, technological superiority is more important today than ever before in recorded history. Fifty years ago, the consequences of facing an enemy who possessed a better rifle were measured in the loss of a few more individual troops. Now the stakes are multiplied a million-fold. If . . . through inattention, failure to realize or disregard of the problem . . . we permit an arch enemy to build aircraft and guided missiles superior to our own, the consequences might well be measured in the loss of whole cities—perhaps even in the loss of our very existence as a nation.

We of Convair recognize this fact of Atomic Age survival. We accept it as a solemn challenge. Every energy, every facility, every talent we possess is being devoted to design and produce aircraft and missiles that will keep America ahead in a race this nation must not lose.

A handwritten signature in black ink, appearing to read "John Jay Hopkins".

CHAIRMAN OF THE BOARD

A handwritten signature in black ink, appearing to read "Joseph T. McNarney".

PRESIDENT

It Began 30 Years Ago

THE aircraft industry and the mousetrap business, otherwise unrelated, have in common a sales principle which has proved more fact than fable.

In a variation of the mousetrap theme, Convair has had the world coming to its door for three decades — ever since May 29, 1923, when Consolidated Aircraft Corporation set up shop at East Greenwich, Rhode Island.

Major Reuben Hollis Fleet, native of Montesante, Washington, established our first doorstep. Initial capital of \$25,000 was supplied by Fleet and his sister, Mrs. E. K. Bishop.

He was a National Guard officer who obtained his wings in 1917 at the Army's Signal Corps Aviation School, North Island, now site of the Naval Air Station, San Diego, California. (A schoolmate, Joseph T. McNarney, then an Army Officer, retired in 1952 as a four-star Air Force general and is now president of Convair.)

During his military career Fleet served as contract-



Convair's turboprop XP5Y-1 foreshadows a powerful new water-based naval "Airmada"

ing officer for the Army Aviation Service and business manager of McCook Air Field at Dayton, Ohio. In 1922, as a civilian, he took over management of the Gallaudet Aircraft Corporation in East Greenwich.

Fleet soon decided that Gallaudet had "nothing worthy of continuity or perpetuity," except its limited manufacturing facilities and an Army contract for a few TW-3 primary trainers.



The B-36 intercontinental bomber is recognized as



the "big stick" of America's strategic air might

Our First Planes . . .

Resigning from Gallaudet, he exercised an option for Dayton Wright Aircraft Company engineering designs, including the TW-3, and formed Consolidated. The fledgling company completed the TW-3 contract in Gallaudet's leased facilities and also built the prototype of an improved trainer, designated PT-1.

Successful demonstration of the PT won a large Army order. With this new contract Consolidated needed better facilities, so it moved in 1924 to the World War I-built Curtiss Company plant at Buffalo,

New York. The Navy became a trainer customer the following year.

Besides the PT-1 and NY-1 (Navy version), the trainer was developed commercially as the Husky and a smaller Fleet. All were tandem-seaters, all set new standards for inherent safety and rugged dependability. Their fame spread world-wide, with 22 foreign nations among the satisfied customers. As a matter of record, business was so brisk that Consolidated provided the Army with one lot of 50 PTs for a token \$1 each!

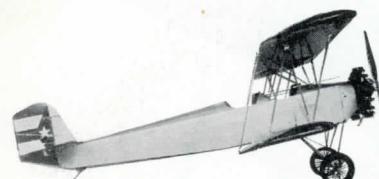
Observation planes were added to the Con-



TW-3 Army trainer

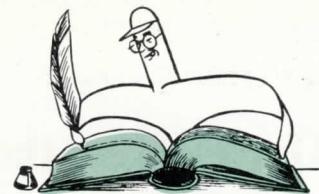
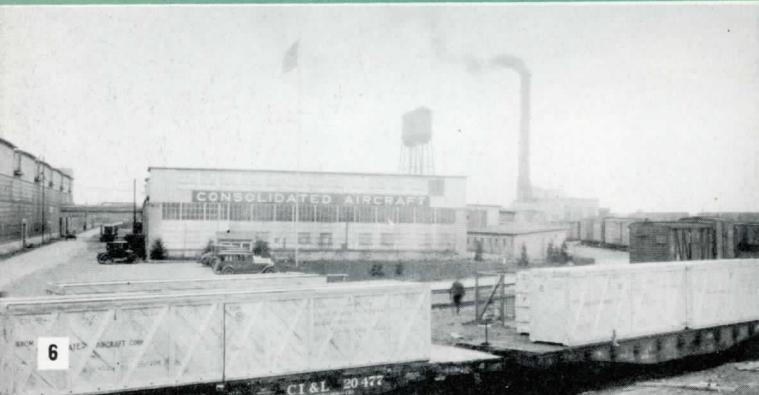


PT-1 Army trainer



PT-3 Army trainer

A typical export shipment from Consolidated's Buffalo plant



solidated line in 1928 after Thomas-Morse Aircraft of Ithaca, New York, was absorbed. In this era were also developed a Navy dive bomber, Fleetster cabin monoplanes and the company's first flying boat, the PY-1 Admiral. From the latter evolved Consolidated's first transport, the 32-passenger Commodore, also waterbased, and later the renowned P2Y and PBY Catalina patrol seaplanes.

Increasing need for all-year flying weather and ice-free seaplane testing waters prompted Consolidated's 1935 cross-country move from Buffalo to San Diego.

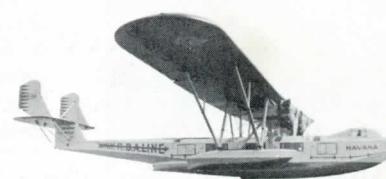
The new factory consisted of one building measuring 300 by 900 feet, bordering the municipal airport, Lindbergh Field, and constructed on then-moist San Diego Bay tide land. Until extensive fill work was completed some years later, San Diego Bay waters lapped at a corner of the factory during high tides. This original structure, known as Building 1, today is but a small part of the company's present-day San Diego Division Plant 1, and the bay now is a half-mile removed.



NY-2 Navy trainer



Admiral seaplane



Commodore seaplane

XPBY-1 patrol bomber at dedication of San Diego plant, 1935



THE CONVAIR STORY (Continued)

...We Out-Produce the World

Consolidated's new California plant soon was employing thousands and enjoying a profitable business, mostly Navy. Then in January, 1939, with the world preparing for war, the Air Force ordered a four-engine heavy bomber which we designed and delivered in record time. This became the B-24 Liberator, which was to be mass-produced, along with Liberator Express (C-87) transport and Privateer (Navy PB4Y) versions in our own and other plants during World War II. Counting equivalent spares, 11,679 B-24 type planes were built by Consolidated alone.

Controlling interest in the company was bought just before "Pearl Harbor" by Vultee Aircraft, Inc., of Downey, California, subsidiary of Aviation Corporation and long famous in its own right. Harry Woodhead, Vultee board chairman, succeeded Fleet at Consolidated and also became president of Vultee. The merger was formalized in March, 1943, making the



PB2Y flying boat

combine Consolidated Vultee Aircraft Corporation — popularly called Convair.

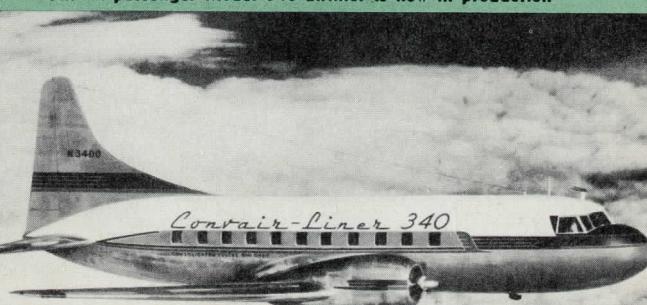
During the war operations expanded to 13 divisions. Peak employment was 101,000, and we led the world in aircraft production, measured both by units and airframe weight. Besides producing all types of planes, we operated ground crew training schools and a global airline.

Control of Convair passed from Aviation Corporation to Atlas Corporation in November, 1947, Floyd B. Odlum of Atlas taking charge as chairman of the board. LaMotte T. Cohu, previously head-of Trans-World Airlines, replaced Woodhead as president and served until he was succeeded by General McNarney in 1952.

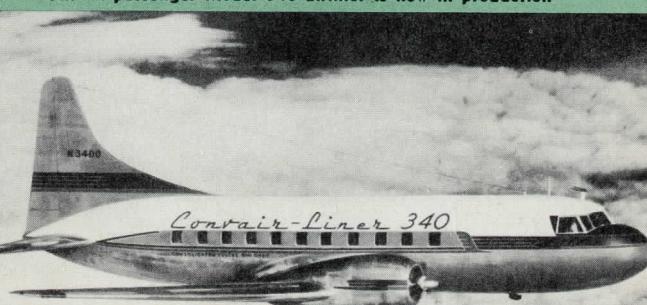
In March, 1953, controlling interest was acquired by General Dynamics Corporation, which also operates Canadair, Limited, of Canada, and John Jay Hopkins of General Dynamics later succeeded Odlum as Convair's board chairman.

A-35 dive bomber

The B-32 "Dominator" bomber tasted action late in the war



P-66 pursuit plane

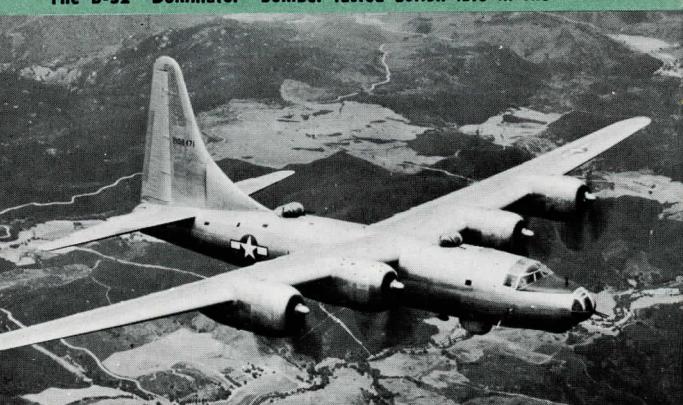


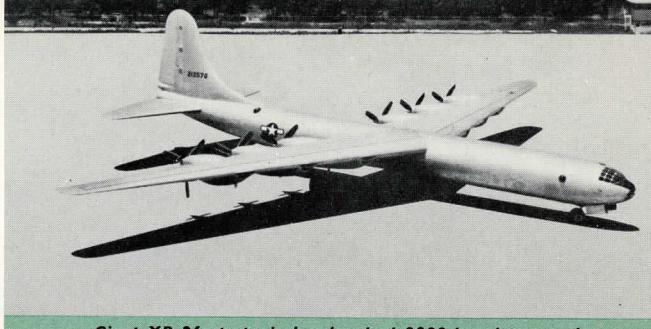
L-5 "flying jeep"



B-24 heavy bomber

The B-32 "Dominator" bomber tasted action late in the war





Giant XB-36 strategic bomber had 3000-hp piston engines



Convair XB-46 was America's first all-jet medium bomber

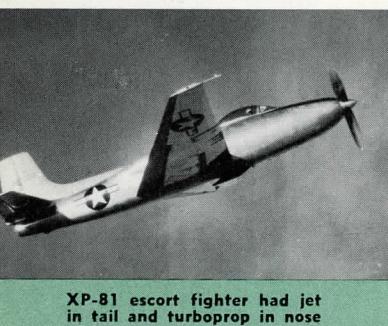
CONVAIR'S contributions to aviation progress are best measured in its products. Equally important, however, are advancements in the design, development and methods of manufacturing air products. Here are a few:

First use of steel tubing in aircraft construction in the United States . . . the TW-3 trainer.

First to adopt a master tooling dock for manufacturing jigs and fixtures with speed, accuracy, economy.

First to utilize average human measurements in designing jigs and fixtures, raising production efficiency by providing adequate working space.

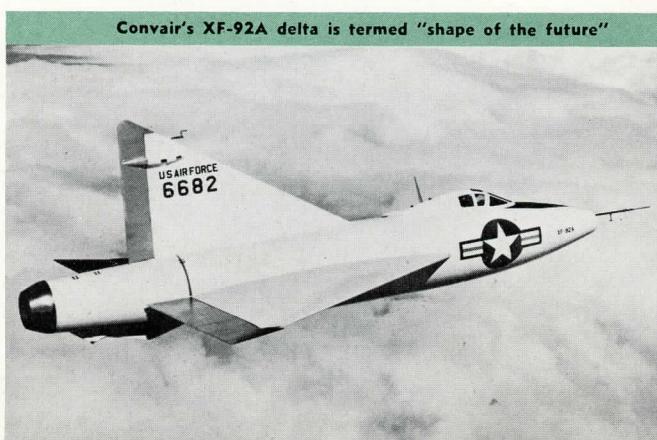
First to design and install integral wing fuel tanks in large aircraft . . . pioneered on PBY Catalinas.



XP-81 escort fighter had jet in tail and turboprop in nose



XC-99 is world's largest land-based air transport



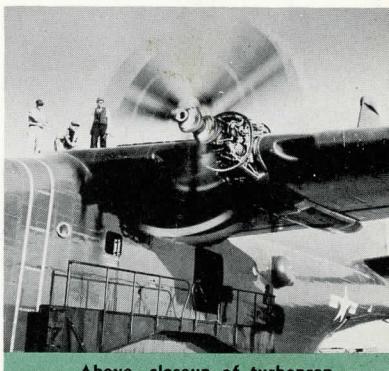
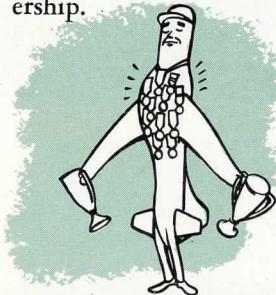
Convair's XF-92A delta is termed "shape of the future"

Famous Firsts

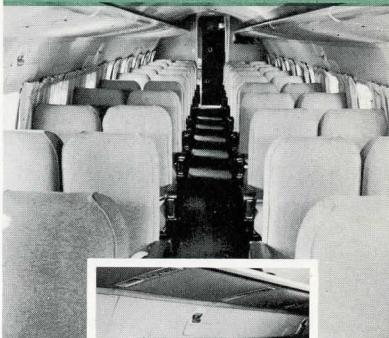
First to use a power-mechanized assembly line for heavy airplanes . . . B-24 production, San Diego.

First to establish and operate a sub-contracting "feeder" complex under own management to speed production.

And first in the air with intercontinental bombers, delta wing aircraft, turboprop flying boats and other achievements on behalf of America's aviation leadership.



Above, closeup of turboprop powerplant on XP5Y-1 flying boat. Below, interior views of pressurized Convair-Liner



Allison-Convair Turboliner is a U. S. turboprop pioneer



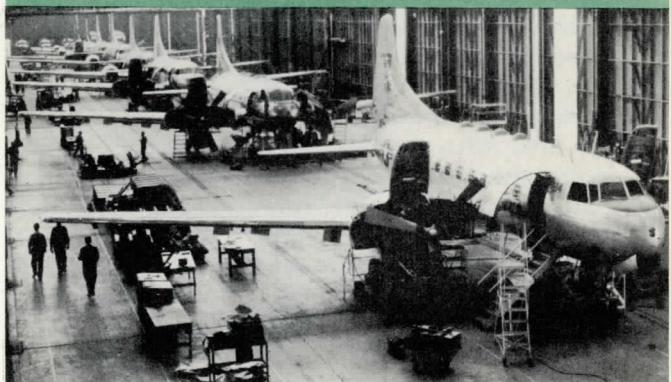
San Diego Division

SAN DIEGO, California's southernmost city, is the home of Convair's General Offices and "parent" division. Since 1935 the community and our company have contributed materially to each other's growth, fame and prosperity in the spirit of good neighbors.

Our original factory area, Plant 1, has expanded to 150 acres. Building floor space has increased tenfold to over 2,500,000 square feet. The Division also occupies 68 acres of a wartime-built Plant 2 production center, and leases outdoor operating space.

Today the San Diego Division is developing and building F-102 interceptors, T-29 trainers and C-131 transports for the Air Force; R3Y transports and other water-based types for the Navy; Convair-Liner twin-engine transports for the world's leading airlines, and other priority projects designed to help keep America invincible in the air.

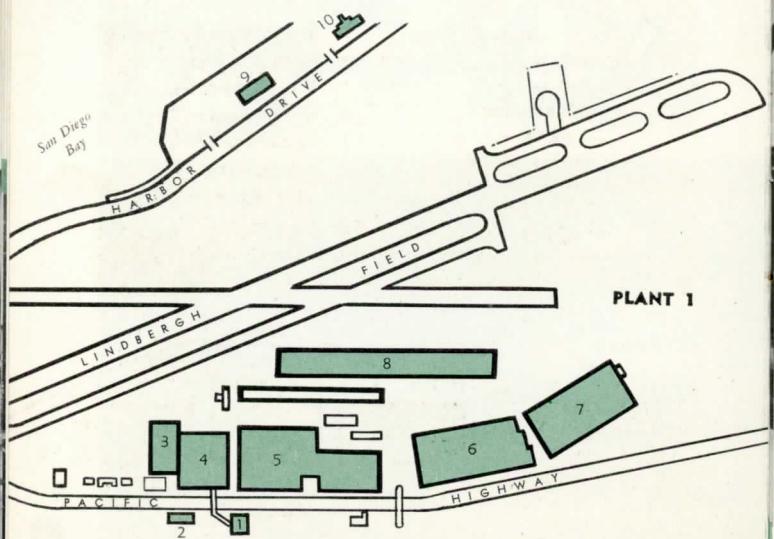
T-29 aircrew trainers move along final assembly line



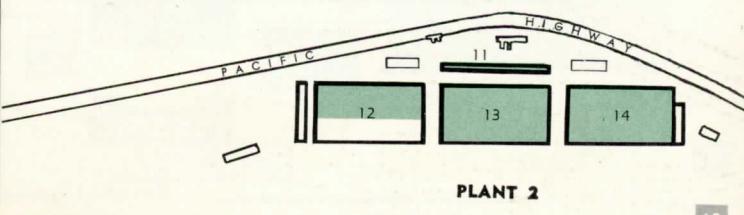
Air view of main San Diego plant, fronting on Pacific Highway



Bow of R3Y seaplane takes shape in assembly hangar

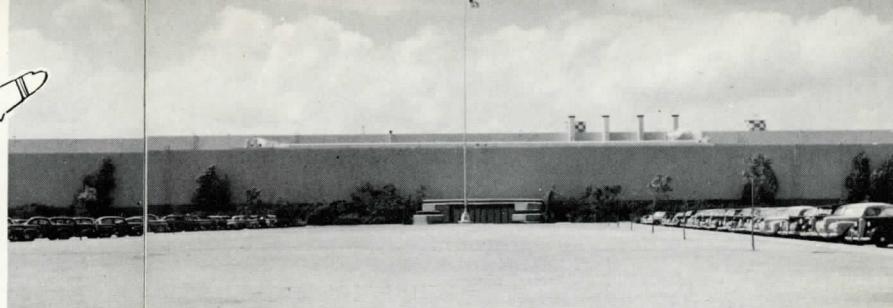
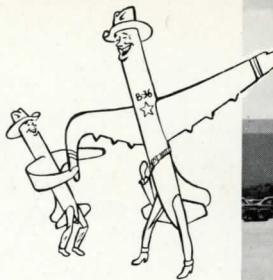


1. Corporation Offices	7. Major Assemblies
2. Cafeteria	8. Final Assembly
3. Engineering, Electronics	9. Field Operations
4. Engineering, Experimental	10. Flight Operations
5. Division Offices, Fabrication, Tooling, Processing	11. Administration
6. Major Assemblies	12. Fabrication, Processing
	13. Assemblies
	14. Assemblies



PLANT 2

Fort Worth Division



CONVAIR'S Fort Worth Division, located in the heart of Texas, is the birthplace of the B-36 and other strategic bombers.

Its government-owned facilities, covering almost 550 acres, constitute the world's largest integrated aircraft plant. Enclosed floor space totals more than 4,000,000 square feet, with over 8,600,000 more in paved working areas. The main assembly building is 4000 feet long and exceeds the area of eight city blocks, without including its mezzanines.

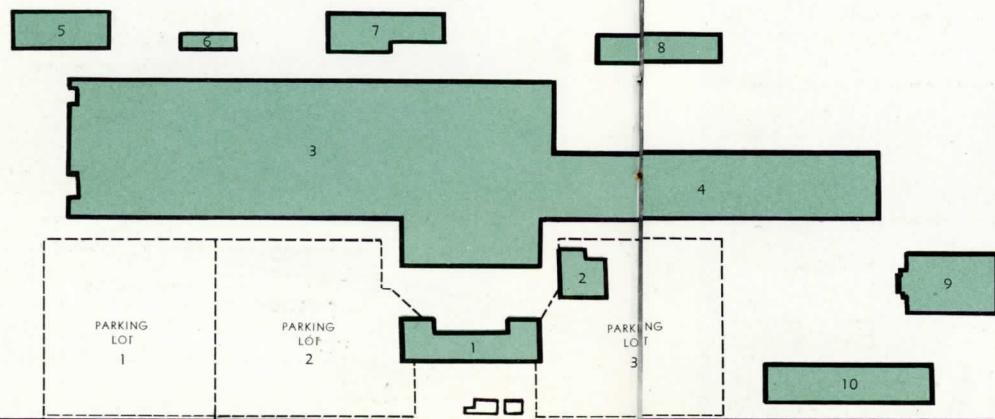
Ground was broken for the plant in April, 1941, and operations began the following February. First production items were B-24 bombers and C-87 Lib-



B-36s leave final assembly bay sideways, nose up-raised

erator Express transports. Then followed B-32 Dominator bombers and, starting in 1946-47, substantial production of B-36s in bomber and reconnaissance versions. Two all-jet B-60 bombers were introduced in 1952.

Current Fort Worth programs include continued production of jet-augmented B-36s and RB-36s for the Air Force; development of the airframe for the first atomic-powered aircraft, and other classified projects relating to strategic air bombardment.



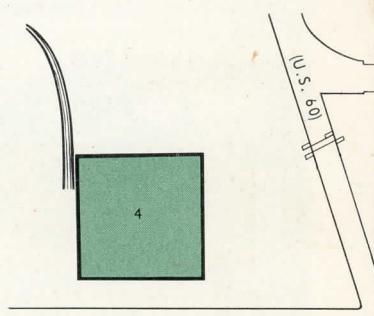
1. Administration, Engineering
2. Cafeteria
3. Fabrication, Sub-Assembly
4. Final Assembly
- 5, 6, 7, 8. Warehouses
- 9, 10. Hangars

Pomona Division

CONVAIR'S Pomona Division was activated March 1, 1951, to develop and produce new-type aerial weapons for the U. S. Navy Bureau of Ordnance.

It operates America's first integrated guided missile plant, a government-owned facility with approximately 1,300,000 square feet of covered floor space located at Pomona, California, 35 miles east of Los Angeles. It employs several thousand persons.

Formal ground-breaking occurred on August 6, 1951, when the plant site was still a walnut grove, and construction began shortly thereafter. The air-conditioned plant was fully activated in 1953.

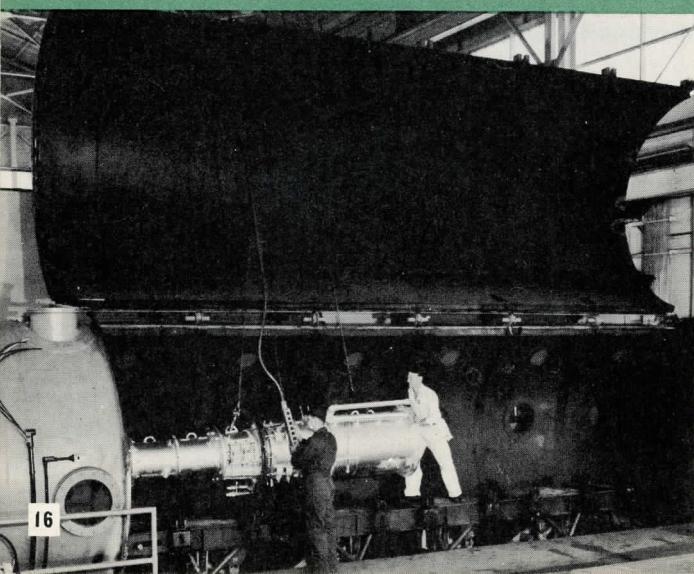


Pomona Division was "commissioned" by U.S. Navy in May, 1953



THE Daingerfield Division of Convair, located approximately 175 miles north-east of Fort Worth, Texas, operates the Ordnance Aerophysics Laboratory for the U. S. Navy Bureau of Ordnance, under direction of the Applied Physics Laboratory of The Johns Hopkins University.

Large-scale ramjet engine in high altitude test chamber



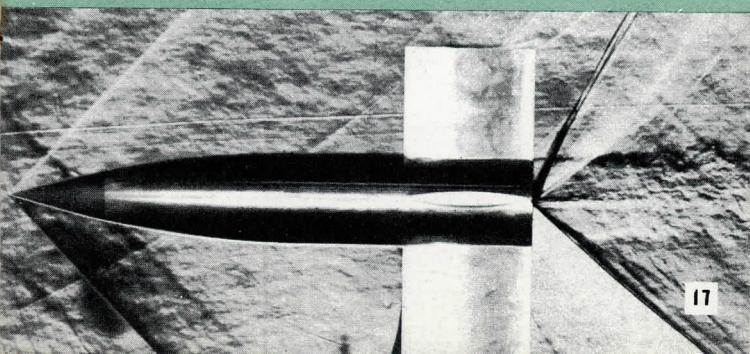
Daingerfield

Division

Division facilities include a supersonic wind tunnel, a ramjet engine test burner and a high altitude test chamber. The latter is capable of testing large-scale ramjet engines at simulated altitudes up to 20 miles above the earth, and at speeds four or more times that of sound.

It was created in July of 1945 as the Ordnance Aerophysics Laboratory, and was raised to division status in November, 1951, because of the expansion and increasing importance of its research and development activities. It employs several hundred persons.

Schlieren photo reveals airflow pattern of wind tunnel model



PREFERRED ... THE WORLD OVER

The medium range Convair-Liner, internationally preferred for dependability, speed and comfort, is the world's most popular postwar twin-engine transport. More than 350 Convairs* now are, or soon will be, in service on all six continents and parts of the Pacific with these leading airlines:

(*As of September 15, 1953.)





ASIA

EUROPE

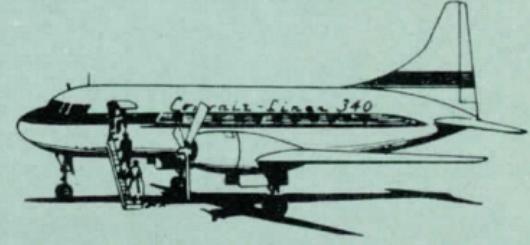
AFRICA

ASIA

Orient Airways, Ltd.

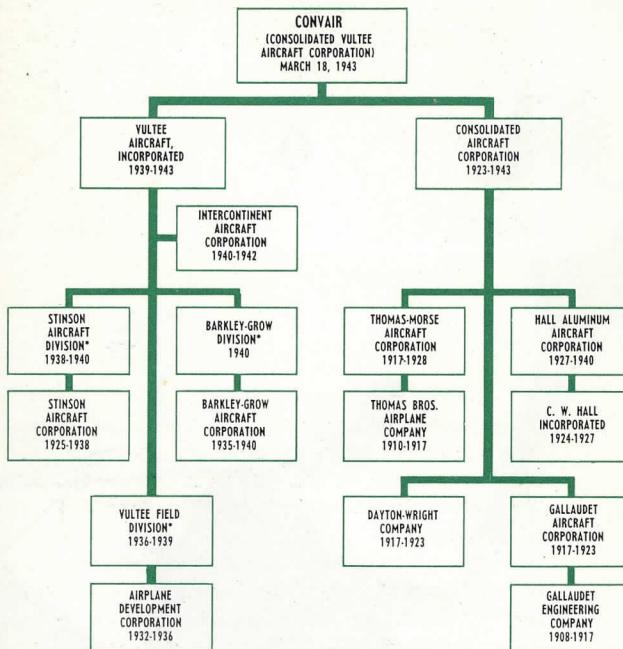
AFRICA

Ethiopian Airlines, Inc.





CONVAIR WAS BORN HERE. The date: May 29, 1923. The place: East Greenwich, R. I.



CONVAIR'S FAMILY TREE

Convair was formed on March 18, 1943, by the merger of Consolidated Aircraft Corporation and Vultee Aircraft, Incorporated, the latter a subsidiary of The Aviation Corporation (Avco). This genealogical chart traces to their origins the parent companies of Consolidated and Vultee, listing years when founded and acquired. (*Asterisk denotes a division of the Aviation Manufacturing Company, later Avco.)

THIRTY YEARS LATER. Air view of Convair's home office and plants in San Diego



THE BUSINESS SIDE OF CONVAIR

Convair is a privately owned airframe manufacturing company, operating under the American free enterprise system. Our sole business is the design, development and production of commercial and military airpower.

Ownership of Convair is shared by more than 11,000 stockholders, representing all walks of national life, and each has a voting voice in corporate affairs. Controlling interest is held by General Dynamics Corporation, an engineering and manufacturing firm itself owned by over 7000 shareowners in the United States and Canada.

Convair's Board of Directors, elected by the shareowners, determines the company's policy on major matters, authorizes capital outlays for improvements or expansion, declares dividends when earnings so warrant, and otherwise safeguards the interests of shareowners. The Board also elects the president and other corporate officers who constitute top management.

In addition to government-owned or leased facilities operated by Convair, the company owns a plant, property and equipment with replacement value estimated at approximately \$40,000,000.

Convair currently has unfilled orders

.... a so-called "backlog" in excess of \$1,000,000,000, mostly in government contracts. It should be pointed out, however, that backlog figures can be misleading, particularly in the aircraft business.

This is because many aircraft programs carry at their start only enough funds for initial phases, and imply business far exceeding the amounts listed in a backlog report. On the other hand, business undertaken for the government is subject to possible cancellation, and may not develop into the continuing program originally anticipated.

So the actual backlog at any given time, while somewhat indicative, may be of greater interest than importance. Of much more pertinent value is the company's true state of availability the readiness of its personnel and its facilities to meet the most urgent demands of national need.

Nothing is more imperative for national self-protection, because Convair and the other units of America's aircraft industry provide much of this country's chief advantages over potential enemies: Great inventiveness and productivity. These constitute the real first line of defense for America and our Allies.



GENERAL Dynamics Corporation, which recently became principal shareowner of Convair through purchase of stock from the Atlas Corporation, today is, or plans to be, engaged in engineering and manufacturing activities embracing nearly every phase of the science of dynamics.

Formerly the Electric Boat Company, General Dynamics engineers and builds submarines at its Electric Boat Division, Groton, Connecticut; electric powerplants for ships and industrial machines at its Electro Dynamic Division, Bayonne, New Jersey; aircraft and guided missiles at Canadair Limited, near Montreal, a General Dynamics subsidiary and Canada's largest aircraft company. Another unit, General Atomic Corporation, recently was formed to develop nuclear power applications for industry.

The General Dynamics enterprise began in 1880 with the incorporation of its oldest division, Electro Dynamic, which was itself incorporated in 1899 under the name of Electric Boat Company. More than a half-century ago in 1900 Electric Boat delivered to the United States Navy the USS HOLLAND, world's first successful submarine. Today the Electric Boat Division is building for the Navy the USS NAUTILUS and the USS SEA WOLF, the world's first atomic powered submarines.

Convair — born May 29, 1923 as Consolidated Aircraft Corporation — likewise is a world leader in the application of nuclear energy. Its Fort Worth Division in Texas is developing the airframe for the first atomic powered airplane.

The new association between Convair and General Dynamics is, therefore, of significance and importance to all who cherish freedom and progress.



Airpower Begins with an IDEA

IMAGINATION is the aircraft designer's stock in trade — and the cornerstone of aviation progress.

Yet ideas are only a first step in the advancement of airpower. To be translated into reliable end products they must be developed, tested and proved.

Convair's engineers, and their technician teammates, are men of imagination. They have helped win for America world leadership in the air. Their minds are ever busy with ideas to ensure that leadership.



Preliminary design conferences at Convair launch engineering phase of a new project



Ideas are translated into new products by our design engineers

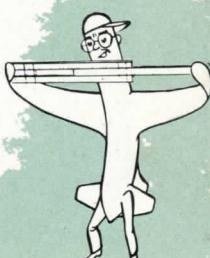


Convair Engineering Development Center sets industry standard

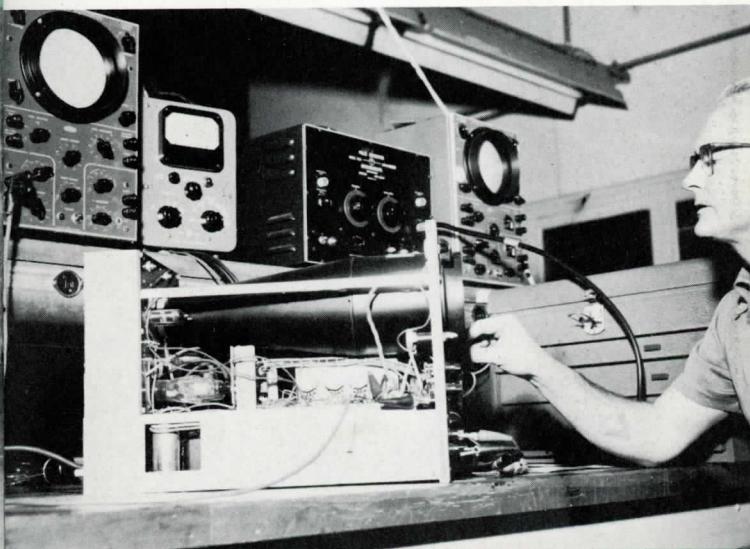
They also are men of *applied* science. They have at hand, or available, every source to examine and evaluate, verify or reject design ideas. They command engineering talent, experience and facilities without peer. These, PLUS imagination, are their tools.

As in all human endeavor, engineering at Convair begins with an idea. And imagination is at work each step of the way from preliminary design to the final production article.

But the objective of Convair engineering is beyond even the end product. Our aim is the *Nth* degree . . . the ultimate . . . in airpower.



Aerodynamic forms are confirmed or denied in large wind tunnels

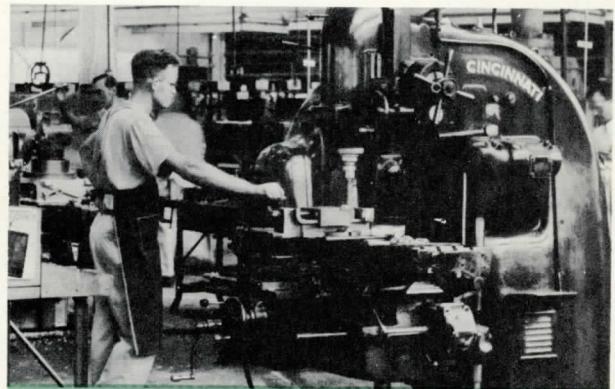


Electronic computers, testers speed research and development

...then Planning and Tooling

ENGINEERING, the sales department, management policy and the customer determine what air products Convair will build. Other departments enter into the "where" and "when" phases. The "how" of manufacture must be answered by planning and tooling experts.

It is their job to (1) plan the required tools and operational sequence for the manufacture of parts



Tooling is the key to quantity production of quality aircraft

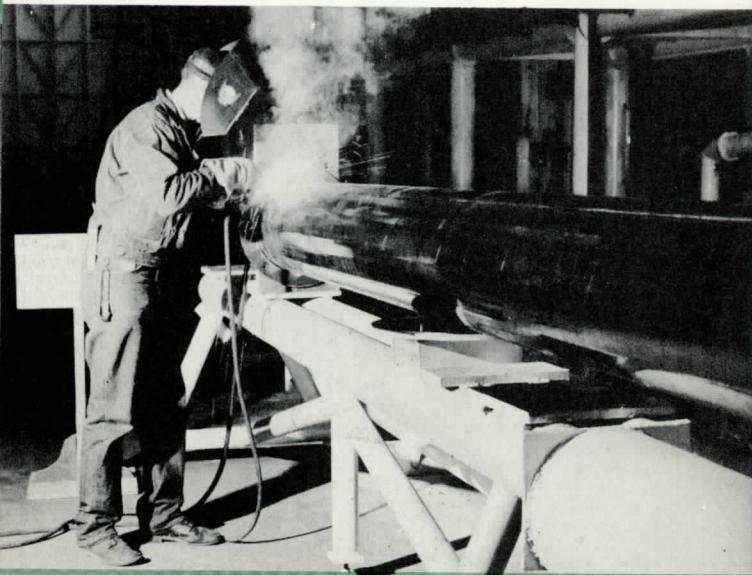


Tool designers have an important role in production planning

and assemblies, and also the sequence of production line assembly and installation operations; (2) design the tools required for the program; and (3) manufacture and maintain the tools.

This is an assignment of real magnitude, because the project can require 65,000 or more new "tailored" tools in addition to thousands of so-called standard tools. And many more will be used by subcontractors in making parts or assemblies for the same project. The tools themselves may vary from thimble-size dies to towering assembly fixtures weighing a million and more pounds.

The experience and skill, the energy and will of planning and tooling experts, like those of Convair, constitute America's greatest technological edge over any combination of airpower rivals.



Welder's torch melds sections of pipe to form R3Y hull buck



Jigs, fixtures outnumber aircraft parts at start of assembly

... and finally Production

ENGINEERING and planning pay off on the production line. It is here that ideas and blueprints are translated into winged aircraft, guided missiles or electronic components. But there is much more to the process than the fabrication of parts and a series of assembly operations.

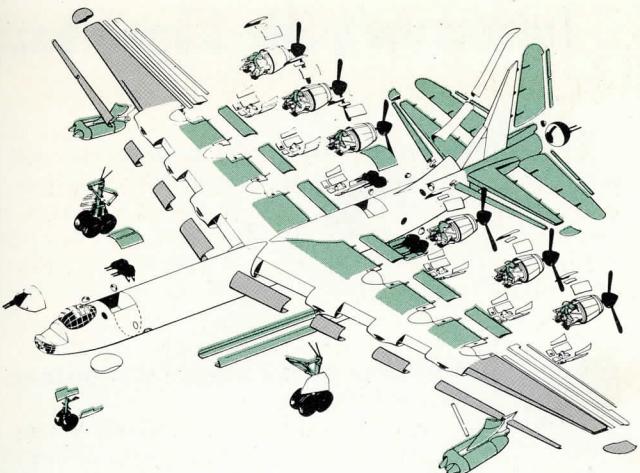
Here occurs a modern industrial miracle, where men, machines and materials are brought together in a mating of the sciences and technology, of age-old crafts and new-born skills.

Production manpower and machines, manufacturing methods and materials will steadily improve, each new product will be successively better.

This is the Convair way . . . and the American way. It is also the way to air supremacy.



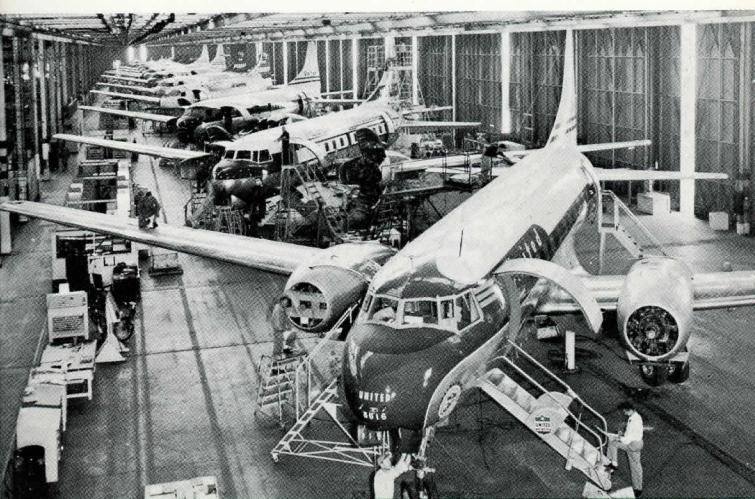
Above, left, interior of Convair-Liner 340 fuselage; at right, engine installation on final assembly line



**EXPLODED VIEW
OF B-36 BOMBER**

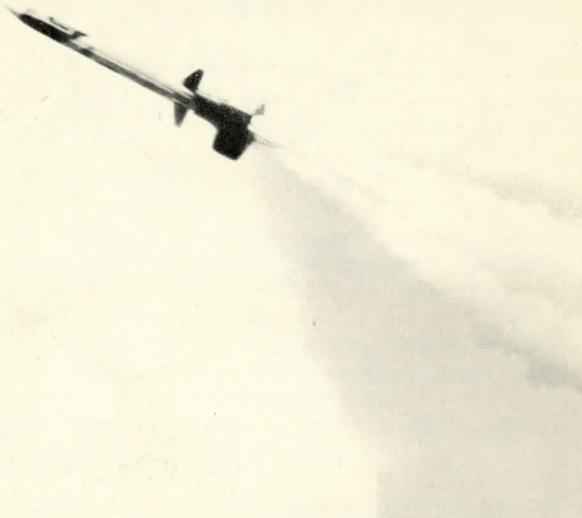


This sketch illustrates the complexity of building modern airplanes. White areas represent assemblies fabricated by Convair at Fort Worth, birthplace of the B-36. Shaded portions designate sub-contracted parts and black areas represent parts furnished by the government. Also used are many purchased items.



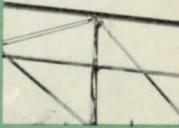
End of the assembly line. Next step is flight, then delivery

Tomorrow's Air Supremacy Must Be Developed Today



GUIDED MISSILES

The evolution of warfare indicates that the guided missile soon may become a tactical weapon for both offense and defense. Convair early recognized this potential, and since 1944 has been a leader in the design, development and production of missiles for the armed forces of the United States. Development progress, long hindered by insufficient knowledge, now is fast accelerating. Mass production of some types already is in the initial stage, and Convair is devoting major effort to expedite the remainder.

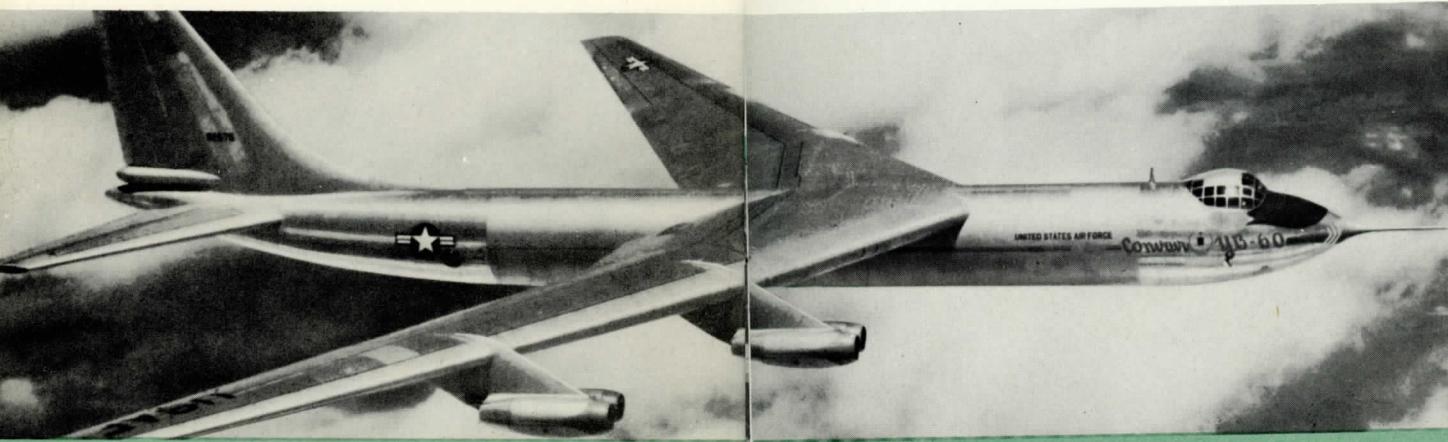


The achievements of yesterday—and even of today—do not guarantee air supremacy tomorrow. So, behind the scenes, Convair is planning and designing products that will help keep American airpower ahead of the rest of the world. We are dedicated to this task in the interest of national security . . . and survival.



ELECTRONICS

Weapons of the future literally must think and act for themselves. The means to this end is electronics, and at Convair electronics is a full-fledged, full-time program for aircraft and missiles alike.

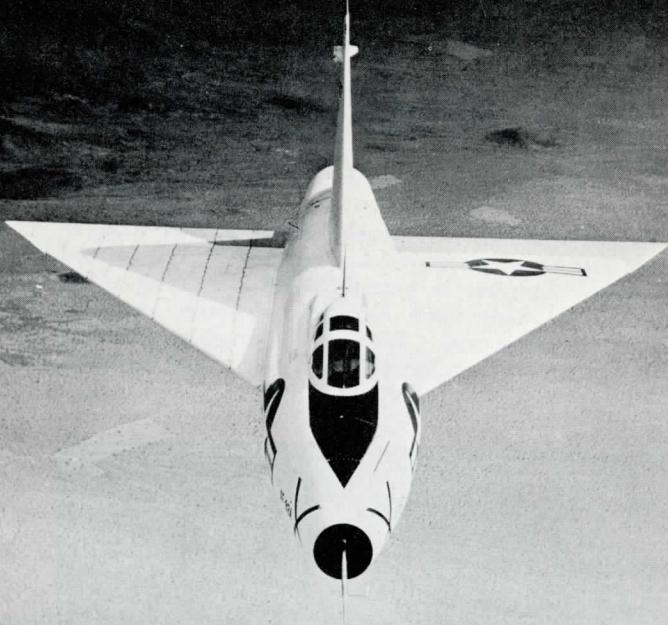


STRATEGIC BOMBERS

The axiom that a good offense is the best defense has been tested and proved in the air, as on land and sea. Convair, famous for the B-24 "Liberator" of World War II, developed

the first intercontinental-range bomber in the Air Force's giant B-36. For years to come the B-36 striking force will be the backbone of America's strategic air might. Now, the all-jet B-60 foreshadows new bomber milestones by Convair.

Flying Darts, Flying Fleet



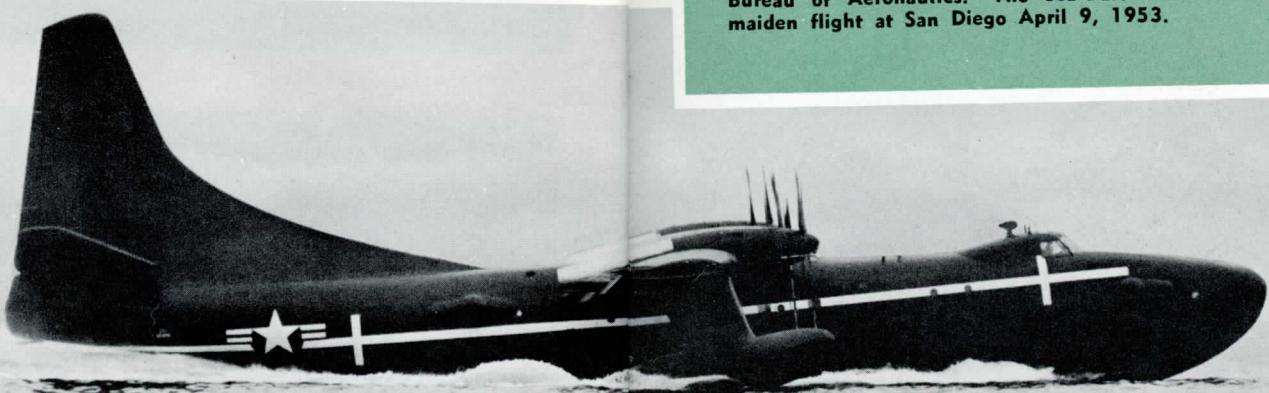
INTERCEPTORS

Convair's contribution to the fighter-interceptor field is signified by the triangle-shaped delta wing, first used on the XF-92A research interceptor (above). This experimental airplane, world's pioneer "delta," marks the true turning-point in interceptor design. Inherent advantages . . . such as superior stability, low drag and freedom from buffeting . . . promise that the dart-like delta configuration, with a 60-degree sweepback, will be tomorrow's supersonic standard. Now in production at Convair's San Diego Division is the supersonic F-102 delta wing interceptor, which will incorporate the latest advancements in electronics and armament. It will resemble the research plane pictured above.



SEA-AIRPOWER

Navy-sponsored hydrodynamic research by Convair is predominantly responsible for restoring water-based airpower to front-rank importance in aviation. Jet-powered seaplane fighters of tomorrow will match . . . or excel . . . the performance of any land-based rival. An outstanding example is the sleek XF2Y-1 "Sea-Dart" (above), world's first delta wing seaplane, developed for the Navy Bureau of Aeronautics. The Sea-Dart made its maiden flight at San Diego April 9, 1953.



Convair's water-based transport airplanes are a new breed, designed to outperform all previous flying boats in the air and on the water — and also to hold their own with the best land-based aircraft of comparable size and mission. Typical

is the 80-ton turboprop R3Y, with the lines and speed of a thoroughbred, the efficiency and stamina of a workhorse . . . 350 mph water-based support for Fleet Logistics Forces the world around. Bright is the future for water-based airpower!

Bigger, Better Convair-Liners

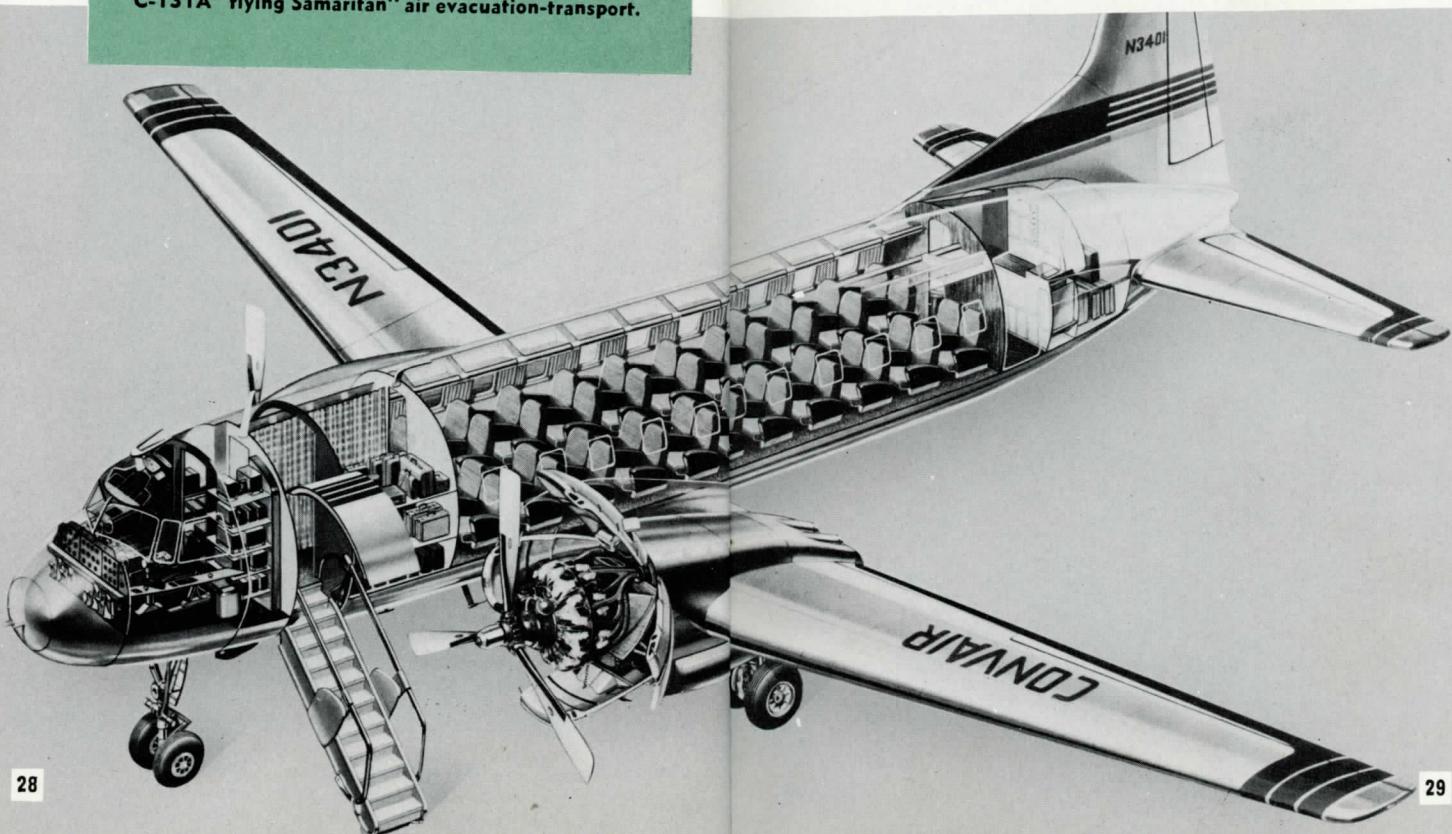


The sleek and sturdy Convair-Liner, outstanding in performance, reliability and efficiency, is second to no other airliner of its time in versatility as well. Its design has been developed steadily . . . for greater payloads, more passengers, longer range and new type powerplants. A Convair with twin Allison T38 engines is America's first turboprop transport. Other Convairs serve the Air Force as T-29 "flying classroom" navigator-bombardier-radarman trainers. And soon to come is another military Convair . . . the C-131A "flying Samaritan" air evacuation-transport.



FAVORED BY AIR TRAVELERS

The medium range Convair - Liner regularly carries more passengers than any other modern twin-engine transport plane. It has a built-in folding stairway, is air conditioned and pressurized for utmost comfort at all operating altitudes.



The Convair Family



THE most important part of Convair is our family of more than 50,000 men and women. It is their skill, care and conscience that make Convair products unsurpassed in the air. Courage also plays a part.

Some of our oldtimers helped design or build the Army trainers and Navy flying boats which gave Consolidated its start in the aircraft business in the 1920s. Others have been with the company since we moved west from Buffalo to San Diego in '35.

Many others wear with pride service pins awarded for 10 or more years of faithful performance, in war-



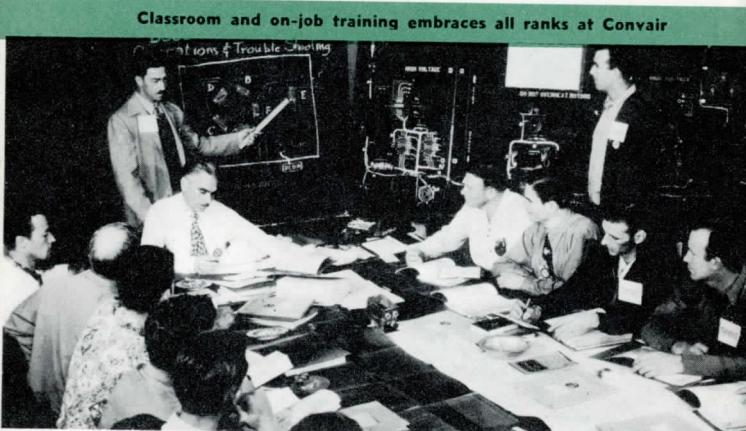
Management Clubs stimulate business and social fellowship

time and peace. And there are thousands of newcomers, with more being added each working day.

The family feeling is ingrained here; it marks our work, our planning and our play. Every one of us, for example, belongs to the Convair Recreation Association, or CRA, which is financed by profits from vending machines and administered by commissioners of our own choosing.

CRA sponsors organized hobby and recreational activities, stages picnic outings, rodeos, ice shows and other special events for all the family at each division. It boosts morale, helps build friendship.

We also have our own bi-weekly family newspaper; a company-wide training program that qualifies us for jobs, improves skill and qualifications or prepares us for promotion; an employee



Educational facilities provide means for self-improvement, promotion



Yule show on ice thrills Convair-Fort Worth audience . . .

one of many events financed by profits from vending machines



Convair Recreation Association sponsors employee activities in sports, hobbies, entertainment. Above, CRA commissioners

suggestion plan that pays plenty for ideas; group insurance program, for ourselves and dependents; company-shared retirement plan; paid holidays and vacations; twice-daily rest periods; the best working conditions in the industry, and many more things. They add up to a human relations program on the family plan, help develop esprit' de corps.

Our design-development-production team is knitted together by a combination of tradition and ambition . . . far beyond the personal. Some of our bravest sons died to prove or improve the products

that built our reputation, our tradition, for quantity production of quality aircraft. The ambition is another family matter — and a pledge: To make Convair's name on aircraft products mean even more than the hallmark "sterling" does on silver. We want our customers to expect . . . and get . . . nothing but the best.



Rest period "ringer"



Circus stars perform at CRA family outing

1923-1953

CHRONOLOGICAL REVIEW OF CONVAIR AIRPLANES

YEAR	DESIGNATION	TYPE
1923	TW-3	Single-engine primary trainer
1925	PT-1	Single-engine primary trainer
1929	XPY-1	Twin-engine Navy patrol seaplane (Admiral)
1929	Fleetster	Single-engine commercial transport
1929	Commodore	Twin-engine commercial flying boat
1931	XO-932	Single-engine liaison plane
1931	XP2Y-1	Three-engine Navy patrol seaplane
1932	XBY-1	Single-engine dive bomber
1933	Fleet 10	Single-engine seaplane
1934	A-11	Single-engine attack plane
1934	P-30	Single-engine pursuit plane
1935	PBY-1	Twin-engine Navy bomber (Catalina)
1935	VI-A	Eight-passenger commercial transport
1939	B-24	Four-engine bomber (Liberator)
1939	P-66	Single-engine pursuit plane
1939	YA-19	Three-place Army Air Corps attack bomber
1940	Voyager	Single-engine personal plane
	105	
1941	BT-13	Single-engine basic trainer (Valiant)
1943	PB2Y-3	Four-engine Navy bomber (Coronado)
1943	XP-54	Twin-boom, pusher-type pursuit plane
1943	B-32	Four-engine heavy bomber (Dominator)
1943	A-35	Single-engine dive bomber (Vengeance)
1943	C-87	Four-engine transport
1943	L-5	Single-engine liaison plane (Sentinel)
1944	PB4Y-2	Four-engine Navy bomber (Privateer)
1944	RY-3	Four-engine Navy transport
1944	AT-19	Single-engine advance trainer (Reliant)
1945	XP-81	Twin-engine prop-jet fighter
1946	B-36	Six-engine heavy bomber
1946	L-13	Single-engine liaison plane
1947	XB-46	Four-engine jet bomber
1947	XC-99	Six-engine transport
1947	Stinson	Single-engine personal plane
1947	Convair-Liner 240	Twin-engine commercial transport
1948	XF-92A	Single-engine jet fighter (delta wing)
1949	T-29	Twin-engine navigator-bombardier trainer
1949	B-36D	Ten-engine heavy bomber (six pistons and four jets)
1950	XP5Y-1	Four-engine turboprop patrol seaplane
	Convair-Turboliner	
1951	Convair-Liner 340	Twin-engine turboprop commercial transport
1952	YB-60	Twin-engine 44 passenger pressurized commercial airliner
1952	XF2Y-1	Eight turbojet engine super bomber
1953	(Scheduled)	Twin-jet delta-wing fighter seaplane (Sea-Dart)
	R3Y	Four-engine Navy turboprop seaplane transport (Tradewind)
	YF-102	Air Force supersonic delta-wing interceptor





CONSOLIDATED VULTEE AIRCRAFT CORPORATION
San Diego and Pomona, California • Fort Worth and Daingerfield, Texas

